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Industrial Horizons



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Vol. 4., No. 5. May-June, 1959

News Publication — Montana State Planning Board

\$40,000 Grant For Small Business Research Announced

Approval of a \$40,000 grant to Montana educational institutions from the Small Business Administration for research into the problems of the state's small businesses was announced in June by the State Planning Board.

Congress, in the Small Business Investment Act of 1958, provided for grants of \$40,000 per year to each state for "studies, research and counseling concerning the managing, financing and operation of small business enterprises and technical and statistical information necessary thereto."

The State Planning Board held a meeting on February 17, 1959, in Helena, to acquaint the state's research institutions with provisions of the program, and with the necessity for submitting a coordinated application. Representatives of Montana State College, Montana State University, Northern Montana College, Eastern Montana College of Education and Montana School of Mines agreed at the meeting that applications for individual projects would be submitted this year to the State Planning Board, which would then fit the proposals into the \$40,000 limitation. This procedure was necessary to insure that only one application for the entire state was submitted, thus eliminating competition for grants between schools, and also to insure that none of the full \$40,000 grant was lost to Montana.

The following research proposals have been approved as part of this year's grant:

1. MONTANA SCHOOL OF MINES: "Research on Operating and Marketing Problems of Small Business Enterprises Engaged in Lead and Zinc Mining" (\$7,835 SBA grant, with \$13,245 matching funds).

2. MONTANA STATE COLLEGE: "Analysis of Expansion and Diversification Possibilities for Existing Small Manufacturing Concerns in the State of Montana" (\$8,550 SBA grant with \$1,220 matching funds).

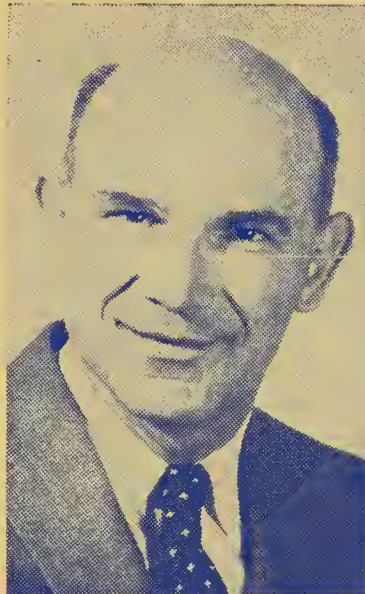
3. NORTHERN MONTANA COLLEGE: "An Investigation of the Training Requirements of Small Businesses With Regard to the Educational Needs of Prospective Employers" (\$10,150 SBA grant plus \$1,650 matching funds).

4. MONTANA STATE UNIVERSITY: "Research on Small Business Success and Failure in a Natural Resource Economy" (\$11,300 SBA grant plus \$3,500 matching funds).

5. Administration costs of State Planning Board: \$2,165 plus \$2,200 matching funds.

A July meeting is planned to prepare a consolidated application for next year's grant.

NEW PLANNING BOARD DIRECTOR



Elbert O. (Bert) Sowerwine, Jr., assumed duties as Director of the State Planning Board July 1. His background lies in chemical and industrial engineering and ranching.

WANT NEW INDUSTRY? FREE FILM TELLS HOW

A new film on community development, "THE HUGO STORY," is now available for free showing from the State Planning Board in Helena.

What can a dying town do to regain economic prosperity? This is the story of a small town in Oklahoma (Hugo, pop. 5,000) which refused to be content with a declining economy based on agriculture. Many Montanans will remember the dramatic way in which Dr. Randall Klemme, formerly director of the Oklahoma Department of Commerce and Industry, told the Hugo story at the Second Montana Community Development Conference in Butte, January 23-24, 1958 (see INDUSTRIAL HORIZONS, May, 1958). This film relates the techniques used by Hugo in its successful efforts to attract new industry.

The film lasts 30 minutes, is 16mm, in sound and color. It complements the Board's two other films—"Gold Mine on Main Street," a film about industrial development, and "Now for Tomorrow," a film on the principles of city planning.

Sanders County to Grow, Says U. S. Commerce Dept. Official

If the residents of Sanders County are to improve their economic status, they must develop the area's natural resources—water, power, and timber—and bring in wealth by promoting tourist travel, Dr. E. G. Booth, Field Manager of the U. S. Department of Commerce in Minneapolis, told 100 persons attending the first annual banquet of the Sanders County Chamber of Commerce in Plains, May 7.

Shifts in Wood Products Industry

Turning to the development of more jobs, Dr. Booth said the shift is away from the sale of dimension and board lumber as now produced locally. "The trend today is toward packaged and processed lumber products. The trend is to ship products in packages—including prefabricated homes." He predicted the packaging trend would continue to grow in the years ahead.

He said development of natural resources and greater processing of raw materials were ways to create more jobs locally and increase the per capita income of residents in the county.

To encourage industrial development on a long-range basis, Dr. Booth cited these "ABC's of Industrial Development:"

- 1. You need a sparkplug group, such as your Chamber of Commerce.
- 2. You need to analyze economic data.
- 3. You need an organization to provide financial support or backing for expansion and growth of small and new industries.
- 4. You need to make an intensive study of what you have today and what products you are shipping in to see if someone locally can produce or grow some of those products.
- 5. You need to mold public opinion so that the residents are willing to seek new industry and are interested in encouraging industrial development.

Dr. Booth said the chances of additional pulp mills locating in the Thompson Falls area are good and that such an industry or plant is wholly compatible with the recreational advantages of the area.

"Under modern developments, it is not necessary for a pulp mill to pollute and destroy natural resources which are used for recreation." However, the people of Sanders County must decide where a pulp mill will be most beneficial and zone that area for industry.

He warned that large industrial and economic growth will not come quickly, but that the ground work needs to be laid now.

STATE'S HUGE COAL RESERVES

Montana Power Leases Colstrip Property for Future Power Source

Purchase by Montana Power Co. of the vast Colstrip open-pit coal mine, which had been operated by the Northern Pacific Railway since 1924, was announced by the two firms on May 28, 1959.

In a joint statement, the two firms announced that the NP has granted a 30-year lease to Montana Power for 3,300 acres of railway company coal lands near Colstrip, about 30 miles south of Forsyth and 100 miles east of Billings. The transaction is subject to approval by the federal government of leases now held by the railroad.

In St. Paul, NP President Robert S. MacFarlane said the railroad is depending not only on mining royalties but also on substantial revenue for hauling the coal from the field.

Montana Power contemplates that its future power supply will come primarily from steam-electric generating plants rather than hydro-electric installations, according to J. E. Corette, President of the utility in Butte. The company presently operates one 66,000 kilowatt steam power plant at Billings using oil and gas as fuel. The possibility of converting this plant to coal operation, using Colstrip coal 100 miles away, was not discussed. However, the company did announce it is studying the size plant to be installed when there will be sufficient demand in eastern Montana for a second steam-electric plant.

Important Factor in Industrial Growth

"Low power costs are a vitally important element in attracting new businesses and new people to Montana and in maintaining the efficiency and competitive position of existing business in Montana," Corette stated. He also stated that "future utilization of the Colstrip property is one step in plans for the second steam-electric plant.

Colstrip coal will be mined under contract with Montana Power by Foley Bros. Inc., of St. Paul, which has operated the project for the NP since it was opened.

Complete Town

Included in the properties are the town itself, which was built by the railroad in 1924, and which includes 73 houses, a general store, shops, warehouses, office buildings and garages; three large electrically-operated stripping and loading shovels and accessory equipment; and the coal reserves. A modern, two-story school and a church the NP built were donated last year to the community. The property was formerly operated by the Northwestern Improvement Co., a wholly owned subsidiary of the NP, liquidated in 1957.

The NP began using Rosebud coal as a locomotive fuel in 1924 after 10 years of intensive geological and engineering investigations. For the next 20 years the railway burned Colstrip coal in practically all its locomotives between Fargo and Spokane, a distance of 1,250 miles. The locomotives were especially designed to achieve maximum efficiency from the fuel.

Use Declined

During a 30-year period, NP used 42 million tons of coal from Colstrip. Peak

production of 2.6 million tons a year was reached in 1943, the height of World War II. With the advent of diesel locomotives, production dwindled until the mine was closed early in 1958 when the railroad became fully dieselized. The railroad has been looking for users of the deposit for several years. Last year, the NP announced it was leasing its other major coal field at Roslyn, Wn., to the Kittitas County Public Utility District.

The Rosebud coal seam is part of the huge Fort Union formation, stretching over eastern Montana and the Dakotas—the country's largest reserve of coal. The formation consists of a series of soft, light-colored sandstones and shales lying horizontally. The coal bed crops out along many of the small streams of the Colstrip area. The Rosebud seam has averaged more than 25 feet in thickness and is remarkably free from partings or impurities. Therefore, unlike coal from most other deposits, it does not require cleaning. Reserves at Colstrip are estimated by NP at over 1.5 billion tons—sufficient supply for any use in the future.

Low-Cost Mining

Mining is entirely by open-pit methods. The overburden is drilled and shot to loosen it for easy handling. Because the rock is soft, drilling costs and explosive consumption are low. Stripping is done with a Bucyrus-Erie 1050-B electric shovel equipped with a 20-cubic yard bucket. The shovel travels on top of the coal, casting the overburden into the last cut from which the coal has been removed. The thickness of the overburden is variable, but has averaged only about 50 feet.

Standard gauge railroad tracks are laid on top of the exposed coal and an electric shovel with a 10-cubic yard bucket loads the coal directly into 50-ton or 70-ton railroad cars. The coal was carefully drilled and blasted by NP to provide proper fragmentation so that it could be used as locomotive fuel as it comes from the pit, without crushing and sizing.

NP officials say the Colstrip operation is one of the lowest-cost in the nation.

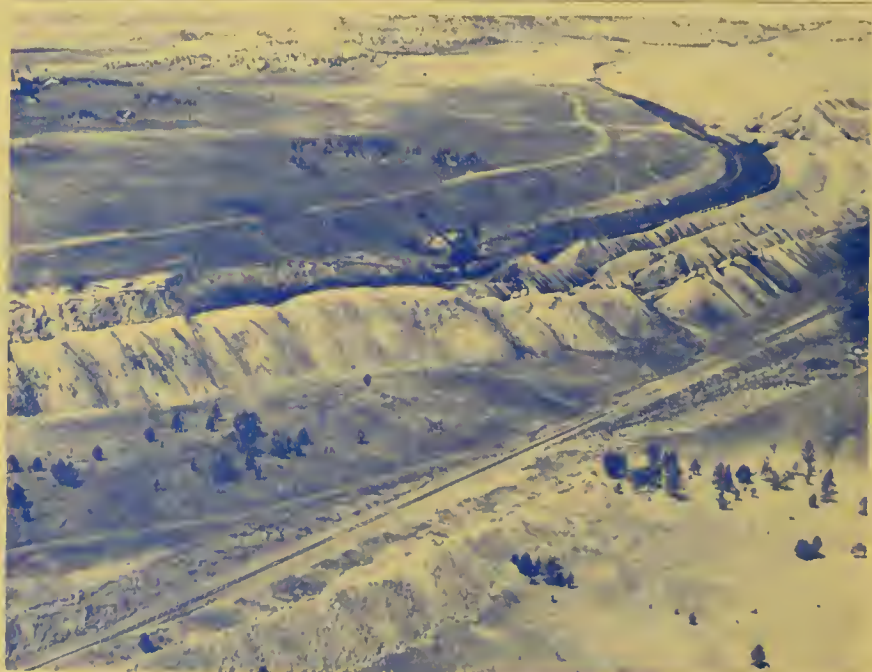
Future Use for Power Generation

The product has proved to be an excellent fuel. It is classified as sub-bituminous with a typical analysis of:

Moisture, 24.1; volatile matter, 28.4; fixed carbon, 40.2; ash, 7.3; sulphur 0.7; BTU 99,090.

Use of the Colstrip deposit for low-cost power, while in the distant future, is a major step forward in utilization of Montana's huge coal deposits for the generation of thermal electric power.

Montana iron ore operations have resumed after a year's shutdown. Young-Montana Corp., has reopened its mines near Stanford with a contract for 75,000 tons in 1959, three times as much as 1957.



Aerial view of the Colstrip property, emphasizing the low-cost open-pit mining operations. (Northern Pacific Railway photos.)

INSURE FUTURE POWER SUPPLY

MONTANA HAS COAL!

Montana has huge coal reserves—second largest in the nation, according to the Montana Bureau of Mines and Geology.

Not considering the unmapped areas, total reserves run well over 200 billion short tons of low-grade coal. Only North Dakota has larger reserves. Original reserves in Montana were estimated in 1949 by U.S. Geological Survey as follows:

Bituminous Coal 2,362,610,000 short tons (mostly in Carbon and Musselshell Counties).

Subbituminous Coal 132,151,060,000 short tons (mostly in Big Horn, Powder River and Rosebud Counties).

Lignite, 87,533,270,000 short tons (throughout Eastern Montana).

Total 222,046,940,000 short tons.

In past years, coal mining was a major industry in Montana—coal was used for household and industrial fuels, railroad locomotion and for cooking in early day smelters. From 1880 to 1957, about 170.2 million short tons of Montana coal

valued at \$348.6 million were mined. Such communities as Red Lodge, Roundup, Bearcreek, Klein, Colstrip, and Belt depended on coal mining for their very existence. Most of them are now areas of substantial unemployment. With the shift to other fuels in recent years, employment in coal mining has dwindled from a high of 1,500 in 1943 to a present low of less than 100.

Long-range Development

Ultimately though, the state's huge coal deposits will be a very valuable resource, according to the Bureau. Primary uses probably will be in generation of power and in manufacture of substitutes for natural gas, motor fuels and coal-tar products. While Montana coal can be mined by inexpensive open-pit methods, its low heat value makes extensive future utilization a long-range proposition. Montana communities, though, should be cataloging their coal resources so as to be able to take advantage of this long-range growth.

Surrounding States Use Region's Coal Resources

Several recent developments in surrounding states make future utilization of Colstrip especially significant.

- Montana-Dakota Utilities Co. has been using Montana lignite in a 44,000 kilowatt steam plant at Sidney since 1958. This is the first large-scale commercial use of Montana lignite, and the first use of Montana coal for thermal generation of low-cost power. The plant is similar to another operated by MDU at Mandan, N. D.

- A total of 55 plants in the Dakotas and Minnesota now burn North Dakota lignite to generate electricity, according to a recent study by Minneapolis-Honeywell Research Center. About 40 per cent of these plants have been installed since 1947. Construction costs for steam power plants in the area vary from \$150 to \$200 per kilowatt of installed power—yielding a production cost of around 2.86 mills per kilowatt-hour, including overhead and fixed charges. This cost approximates the lowest charges from the best hydroelectric sites.

- Calgary Power Co., in Alta., now using gas at its steam plant at Lake Wabamum, plans to switch to coal within five years because a nearby strip mine with more than 59 million tons of coal lies idle.

- At Estevan, Sask., the Saskatchewan Power Corp. is building two \$40 million steam generating stations. Officials estimate the plants will use 18 million tons of Alberta lignite coal in the next 10 years.

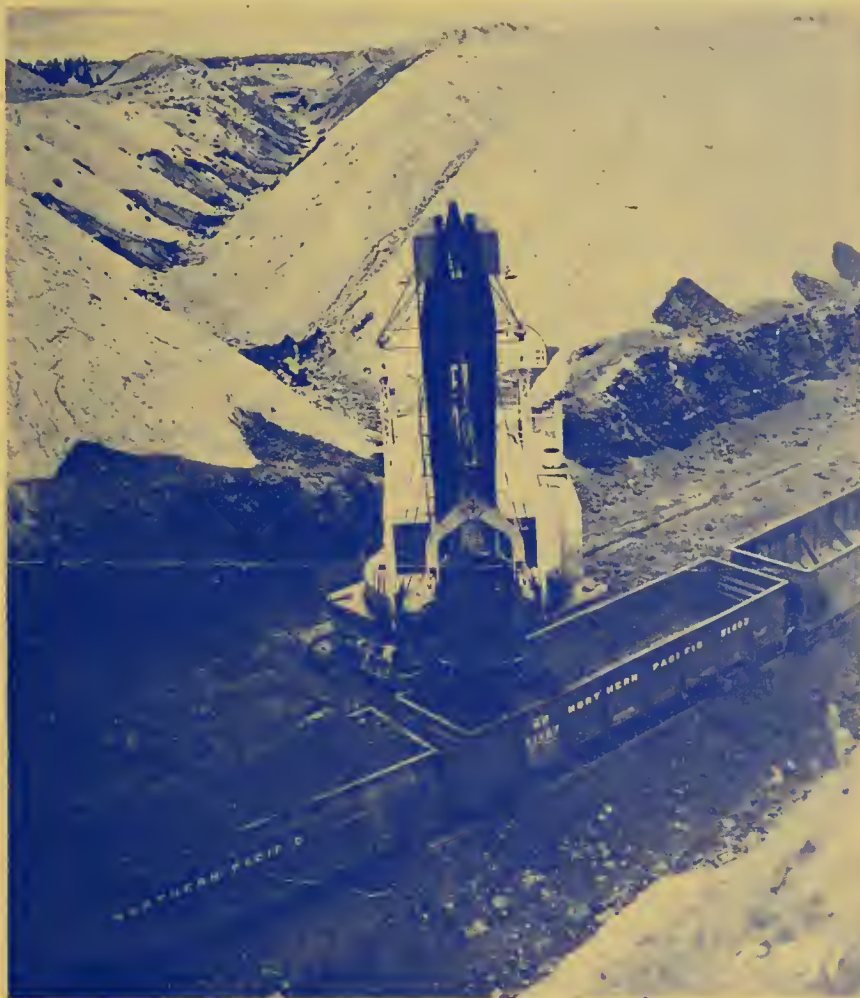
- Several companies in Canada are studying the feasibility of a steel mill in southern Alberta, utilizing Canadian coal and Montana iron (see INDUSTRIAL HORIZONS, Oct.-Nov., 1958).

- Construction has begun on the North Dakota Nitrogen Corp. fertilizer plant near Riverdale. The \$15 million plant will turn out about 130 tons of synthetic ammonia per day from a lignite stockpile of more than two million tons. The lignite was stockpiled in the late 1940's when Garrison Dam was built near Bismarck. When exhausted at the stockpile, lignite will be mined in North Dakota, according to officials of the Chemical and Industrial Corp., of Cincinnati.

- In Wyoming, Pacific Power & Light Co. recently dedicated a 100,000 kilowatt steam plant at Glenrock, near Casper. The plant uses local coal reserves and was designed so that three more units can be added in the future. It is designed to burn either lignite coal, oil, pitch, or natural gas.

- Reynolds Metals Co. has taken leases at Lake DeSmet, Wyo., reportedly for an alumina reduction plant involving a coal-burning power installation.

These and other developments in this area presage tremendous industrial growth from utilization of Montana coal. All experts agree, however, that the growth will probably not occur in the near future, as population and markets are not now sufficient to justify development of large power resources.



A powerful, electrically-operated shovel at Colstrip, above, digs up ten cubic yards of coal at a time and loads directly into railroad cars. Large machinery lowers costs.

U. S. CENSUS DATA AIDS MONTANA GROWTH — STUDY IT!

One of the most valuable sources of information for any industrial development or city planning program is the U. S. Bureau of Census, which conducts periodic surveys of significant economic and demographic information.

Within the next 12 months, the Census Bureau will be conducting five nationwide census to provide a completely new set of statistics about nearly every facet of American life. Included will be completely new information about Montana and its economy. Following is a short summary of these Census:

• **1. 1958 CENSUS OF MANUFACTURES.** Principal inquiries included in the report forms sent to all manufacturing establishments include:

- Employment, payrolls and manhours of production.
- Cost of materials, fuels and electric energy consumed.
- Inventories, beginning and end of year.
- Capital expenditures.
- Quantity and value of selected materials used.
- Products shipped, quantity and value (value added by manufacture).

In addition, a separate sample survey of establishments covering selected expenditures for the year 1957 is being conducted as part of the 1958 census. This survey covers:

Expenditures in 1957 for maintenance and repairs on structures, grounds and equipment.

Selected supplementary employee costs in 1957 (including payroll taxes, pension plans, health and welfare plans and unemployment compensation plans).

Insurance, rent and taxes in 1957.

Depreciable (or depletable) assets.

All this information, of great value to manufacturers and industrial development groups, is being gathered now, will be compiled into significant categories and issued in preliminary form this fall. Final area reports (including information about Montana manufacturers by county) early in 1960.

• **2. 1958 CENSUS OF BUSINESS.**

Primary inquiries included in report forms from all retail, wholesale, service and warehouse establishments include: annual sales and/or receipts; payrolls and employment; number of proprietors; form of organization (corporation, partnership, etc.); inventories; receivables and bad debt losses; operating expenses; storage capacity (warehouses and petroleum bulk plants only) and analysis of sales by commodity lines (wholesale trade only).

Results, covering all business and service establishments by classification and county, will be available in early 1960.

• **3. 1958 CENSUS OF MINERAL INDUSTRIES.** Now being conducted, this is a survey of value of mineral products; industrial and geographic structure of mining; cost of developing and operating mineral properties; and labor, materials and capital requirements for mineral operations. Published material will be ready in early 1960.

• **4. 1959 CENSUS OF AGRICULTURE** will be taken this fall by enumerators who will visit each farm and ranch in the country to collect the following information (among other things):

- Acres of land owned, rented or managed by the farm operator.
- Acreage, quantity harvested and amount sold for each crop.
- Acreage of farm land classified according to use.
- Acreage irrigated and sources of irrigation water.
- Race, age, farm residence and off-farm work by the farm operator.
- Number of livestock by age groups.

In addition, the following information is to be obtained for a sample of farms, including about 140,000 large farms around the country and one in five of all other farms:

- Sales of dairy products.
- Number of various kinds of livestock sold.
- Acreage fertilized and quantity of fertilizer applied for important crops.
- Expenditures for machine hire and hired farm labor.
- Farm employment of farm operator, members of operator's family and hired workers.
- Farm wage rates.
- Appliances and facilities in farm homes.
- Farm equipment.
- Method of paying rent.
- Value of land and buildings.
- Extent of mortgage.

Preliminary state and county releases on the 1959 Census of Agriculture will be issued in mid-1960, and final reports in 1961.

• **5. 1960 CENSUS OF POPULATION AND HOUSING** is the regular decennial census of the entire United States. A tremendous amount of specific data on character and extent of the population, and on age and condition of housing, is taken in this census. First results, which are preliminary population totals for places of 10,000 and over, and for each county, will be announced locally in May of 1960. By the end of 1960, officially certified population figures for the 50 states and for all counties and cities will be available. Tentative publication dates have been scheduled for 1961 for general demographic, social and economic characteristics of the population, and for housing statistics.

• **6. Another census, already completed, is the 1957 CENSUS OF GOVERNMENTS,** which is a complete survey of all state and local governmental units, including organization, employment, finances and taxable property values. Most of the results are now available from the Bureau of Census.

Confidential Data

The Census Bureau emphasizes that all data collected is confidential. No data on individual businesses or persons is released, and all published material is presented in such a manner as to prevent disclosure of any figures about individuals. Furthermore, no Census report can be used for purposes of taxation, investigation or regulation.

Useful Information

Thus it may be seen that a wealth of information about all phases of our economy will soon be available for use by local groups.

Businessmen are important users of Census statistics—manufacturers and distributors use the data in measuring markets and comparing their operations with those of the rest of the industry. Real estate agents and contractors use the housing statistics.

Research groups, such as Chambers of Commerce and local industrial development agencies, analyze Census data to determine potentials for growth, and to learn more about their own economies.

City-county planning boards depend on both economic and population data for information about trends in their communities.

Further information on all these Census is available either from the State Planning Board in Helena or the U. S. Bureau of Census in Washington, D. C.

The people of Lewistown are to be congratulated on successfully raising subscriptions for a new community-owned hotel. Faced with inadequate housing for conventions, due mainly to a series of fires in recent years which destroyed the city's two main hotels, community leaders in Lewistown hired a professional fund-raising organization to plan their campaign, then systematically contacted all local residents, businesses and neighboring farmers. The campaign was successful to the tune of \$526,000, and necessary financing has been arranged to begin construction on a \$950,000, 80-room hotel this year. The Lewistown Chamber of Commerce views this project as the first step in a long-range community improvement-industrial development program. Two other such projects have been successful in Montana in recent years—the Baxter in Bozeman and the Lalonde in Sidney.

MONTANA STATE PLANNING BOARD

Sam W. Mitchell Building

Helena, Montana

Industrial Horizons . . .

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